



740 Spectral Processor



The Dolby 740 is a two-channel, dynamics-based processor for emphasizing low-level sonic details in audio programming.

Whether bringing out the subtleties in all aspects of recording, mastering, postproduction, and live performance, or lending character to audio broadcasts, the Dolby® 740 Spectral Processor provides a high level of flexibility in audio processing. Based on the versatile filtering characteristics of Dolby SR noise reduction, this two-channel dynamic processor allows boosting of low-level signals while leaving high-level signals untouched. Like a magnifying glass for sonic details, the Spectral Processor allows you to tailor your sound like never before.

The Dolby 740 processes low-level signals in a side chain, where as much as 20 dB of boost can be added in low-, mid-, and high-frequency bands. The side chain's signal is then added to the original input signal, resulting in an output with the low-level details boosted, while the high-level signals remain unaffected.

For maximum effectiveness, the threshold below which the processing occurs, the amount of boost in each band, and the crossovers between bands are all user-adjustable. A gentle sliding-band noise reduction circuit providing up to 12 dB of action is also included, to reduce any source noise that the low-level equalization process might have emphasized. Other controls include a stereo link switch and adjustable output level.

The user adjustments described above make it possible to emphasize ambience, lift harmonics, and bring out otherwise inaccessible details—all without compressing or limiting transients, increasing overall level, or disturbing the overall sense of dynamics.

User adjustments for selectively boosting low-level signals allow broadcasters to tailor the sound for their station, whatever the format. It conveys all the detail of the original source material while eliminating the over-processed sound that can fatigue listeners. When used in conjunction with a conventional compressor/limiter, the Spectral Processor adds greater punch, presence, clarity, and loudness to broadcast signals.

Dolby 740 Spectral Processor

Front-Panel Controls and Indicators

Individual for each channel

Threshold:

Sets level at which signals receive most boost; adjustable from 60 to 40 dB below the nominal operating level; five-LED meter array indicates when processor is most active; input clip LED

Equalization:

Three-band filter section

Low-to-Mid crossover frequency adjustable from 75 Hz to 1 kHz, center detent at 300 Hz

Mid-to-High crossover frequency adjustable from 500 Hz to 8 kHz, center detent at 2 kHz

Boost controls for each band; greater than 20 dB with crossover controls set to their detent positions

Three-position EQ switch selects one of the following modes: In—processing active; main path and side chain added within the unit; Side Chain—side chain signal only, to ease adjustment of the EQ controls or allow external manipulation; Out—all processing bypassed (including Source NR)

Source NR:

Sliding band noise reduction section reduces noise present in the input signal; adjustable 0–12 dB

Filters:

Selectable; prevent unwanted signals from entering the low-level processing stage

Highpass: 100, 200 Hz

Lowpass: 4, 8 kHz

Output:

Sets overall channel gain; adjustable from –14 to +6 dB (with processing out). Clip LED will light to indicate clipping in the output stage.

Stereo Link:

Switch combines dynamic processor control signals to prevent image-shifting with stereo signals; EQ Crossover and Boost controls remain independent even when processors are linked

Operating Levels

Switch on rear of unit selects between High (+4 dBu) and Low (–6 dBu) line-level operation

Inputs

XLR type connectors, balanced, floating; impedance: 10 k Ω . Maximum Level: High: +24 dBu; Low: +14 dBu

Outputs

XLR type connectors, balanced, floating; impedance: 20 Ω . Maximum Level: +26 dBu balanced, +21 dBu unbalanced (irrespective of the position of the High/Low switch); either leg of the output may be grounded for unbalanced operation with no loss of level

Power Requirements

User-selected voltage nominally 100, 120, 220, 240 VAC 36 W approximate

Dimensions and Weight

1-U rackmount: 44 × 483 × 248 mm (1.75 × 19 × 9.76 inches); further 65 mm (2.5 inches) depth required for the XLR connectors

Net: 5.3 kg (11.6 lb) approximate

Environmental Conditions

0° to 40°C (32° to 104°F)

Warranty

One-year limited, parts and labor; see disclaimer. Specifications subject to change without notice.

Disclaimer of Warranties

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